TDT File

TSSG/RED/ATB-056-70
11 March 1970

MEMORANDUM FOR: Chief, Support Services Division, TSSG

ATTENTION : Chief, Logistics Branch, SSD, TSSG

THROUGH : Chief, Image Technology Laboratory, ATB, RED, TSSG
Chief, Advanced Technology Branch, RED, TSSG
Chief, Research and Engineering Division, TSSG

SUBJECT : Transfer of Equipment

REFERENCE : Memo, TSSG/RED/ATB/EL-74/69, dtd 16 Sept 1969

1. The film scanner currently being modified by [redacted] 25X1
[redacted] is scheduled for delivery to NPIC @ 1 June 1970. An integral part in 25X1
the operation of this instrument is an air compressor which will supply the needed compressed air to the air bearings when the instrument is in the scan mode.

2. Optics Division/ORD/DD/S&T has retained possession of a Worthington air compressor ($27\frac{1}{2}$" x $27\frac{1}{2}$" x 64") which had originally been purchased for this instrument. The compressor is located on the fifth floor of the Ames Building in Rosslyn, Virginia.

3. A memorandum (see reference) was written in September, 1969 requesting transfer of this piece of equipment from its present location to NPIC. No action was taken on this memo.

4. It is requested that immediate action be taken to relocate the Worthington air compressor at NPIC. [redacted] O/ORD/DD/S&T, 25X1
is the person to be contacted at Ames Building regarding transfer of this equipment. [redacted] 25X1

[redacted] 25X1
TSSG/RED/ATB/ITL

Distribution:
Orig. - Addressee
1 - RED
2 - RED/ATB

Attachment: Referenced Memo

~~SECRET~~

SECRET

TSSG/RED/ATB/EL-74/69
16 September 1969

MEMORANDUM FOR: Chief, Support Services Division, TSSG

THROUGH: Chief, Research and Engineering Division, TSSG

SUBJECT: Preliminary Engineering Requirements for the IDT Computer Display System

1. The IDT computer display system currently under development at [redacted] is now scheduled for delivery to NPIC on 1 April 1970. To expedite installation of this system, some minor modifications and requirements should be completed beforehand. These include the following: 25X1

a. Compressed air for the air bearings on the high speed IDT must be supplied by an external compressor. An air compressor with the capability of supplying between 80 and 150 pounds/square inch (psi) and an air flow of at least 10 cubic feet/minute (cfm) should be considered for installation. A 500 psi air line should be connected to the IDT from the compressor. A flexible hose with an inner diameter of $\frac{1}{2}$" would suffice.

Optics Division/ORD has a Worthington air compressor ($27\frac{1}{2}$" x $27\frac{1}{2}$" x 64") which fulfills the above specifications. This compressor was originally purchased for the IDT and is currently not in use. Initial contact with ORD personnel indicate that obtaining the compressor is totally feasible. An effort should be made to obtain and install it before delivery of the IDT computer display system.

b. A "false floor" similar to one in a computer room should be installed in room 4N806A to protect the cables and wires leading from the main unit of the IDT to the auxiliary units. This "false floor" need not be more than 4" above the existing floor and should be constructed so as not to interfere with the doors leading into that area. The lower work drawers in the room will not be affected.

SECRET

2. These basic requirements should provide a suitable environment for the IDT computer display system. Installation of these items should begin no later than 1 March 1970. It is estimated that it will require approximately four weeks to complete this preliminary work.

3. In addition to these requirements, certain architectural, electrical, and mechanical modifications will be needed. [redacted] conducted a survey of room 4N806A in March 1969. His recommendations are attached. Action should be taken in the near future on these modifications. 25X1 25X1

[redacted] 25X1

TSSG/RED/ATB/EL

[redacted] 25X1

APPROVED: _____

16 Sept. 1969
Date

Chief, Exploratory Laboratory
ATB/RED/TSSG

Attachment: As stated above

Distribution:
Original - TSSG/SSD/CH
1 - TSSG/RED
1 - DD/S&T/ORD/Optics (Attn: [redacted] 25X1
1 - TSSG/RED/ATB/EL (file)

PRELIMINARY INVESTIGATION

Room 4N806A

ARCHITECTURAL — The existing ceiling will have to be cut and patched to accommodate the new mechanical and electrical system components.

ELECTRICAL — The new equipment requires a new 100 amp., 120 volt panel. This will be run from a new circuit breaker attached in the electric closet on the north riser on the fourth floor, and extended over the ceiling to a new panel in the room. There will also be a new 3 KW heater in the mechanical system modifications.

MECHANICAL — The room is presently air conditioned from a double duct, high velocity mixing box supplying approximately 200 cfm to the room thru a 24x24 perforated diffuser thru an absolute filter. The air leaves the space thru a lightproof louver in the door. Access to the mixing box is thru a door in the plaster ceiling. The mixing box is at the end of the branch line serving the area.

The new equipment to be located in the space will increase the air conditioning requirements far beyond the capacity of the existing mixing box or the branch ducts in the vicinity. There is a 12" diameter cold branch duct running above the ceiling of the space that serves only the air shower. The proposed scheme for properly cooling and filtering the air to the space is as follows:

(1) Remove the existing mixing box and associated ductwork and controls including space thermostat.
(2) Install new 1000 cfm variable volume box with 3KW electric reheat coil. Connect inlet to existing 12" diameter cold duct.
(3) Box shall discharge thru flexible duct, plenum, absolute filter, and 24x24 curved adjustable blade ceiling grille to space.
(4) Room temperature shall be controlled by a sensing element located in the center of the supply grille and a controller mounted on the mixing box.
(5) Relief of air from space shall be by means of a transfer duct to exit corridor outside of air shower.

The installation of the new variable volume box will require partial removal and replacement of the plaster ceiling.

COST ESTIMATE

25X1